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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,068	07/18/2003	Hans-Jorg Timme	Z&PINFN10356	2691

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EXAMINER	
GUERRERO, MARIA F	
ART UNIT	**PAPER NUMBER**
2822	

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/623,068	TIMME ET AL.	
	Examiner	Art Unit	
	Maria Guerrero	2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29 and 32-34* is/are pending in the application.

4a) Of the above claim(s) *1-21* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *22-29 and 32-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to Appeal Brief filed May 8, 2006 and the Appeal conference held on July 19, 2006. In view of the Appeal Brief and the Appeal conference, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below with respect to claims 27 and 28.

Status of Claims

2. Claims 30-31 are canceled. Claims 1-29 and 32-34 are pending.

Election/Restrictions

3. Claims 1-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on October 15, 2004.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 22-24 and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Funada et al. (US 6,078,299).

5. Funada discloses a filter device comprising: a carrier substrate (31), at least one filter (14) carried by said carrier substrate; and a capping substrate (12); said carrier substrate (31) and said capping substrate (12) defining at least one cavity (17) therebetween containing said at least one filter; wherein said at least one filter is an acoustic wave filter; a surface Acoustic Wave Filter. Funada further teaches wherein said carrier substrate includes an integrated circuit (15); at least one contact pad (15) for coupling said at least one filter to a wiring substrate through at least one bonding wire. Further at least one interconnection (15,16) for coupling said at least one filter to a wiring substrate using flip chip technology. Wherein said at least one interconnection is a solder or metal bump (16). Please see figures 1-9 and discussion on column 4, line 10 to column 8, line 10.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Funada et al. (US 6,078,299) in view of Tanski (US 4,409,570).

Funada is applied supra but lacks the anticipation of wherein said at least one filter is a Bulk Acoustic Wave Filter including at least one Bulk Acoustic Wave Resonator and wherein said at least one filter is a Sacked Crystal Filter. Tanski

discloses wherein said filter is Bulk Acoustic wave filter (12) including at least one Bulk Acoustic Wave resonator (21). See figures 1 and 2 and discussion on column 2, line 60 to column 3, line 60. Examiner takes official notice that it is well known in the art to form a filter that is a Stacked Crystal Filter. In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time of invention to form said at least one filter as a Bulk Acoustic Wave filter including at least one Bulk Acoustic Wave resonator or a stacked Acoustic wave Filter as taught by Tanski, because the filters separate the surface acoustic waves.

7. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Funada (US 6,078,299) in view of Penunuri (US 5,287,036).

8. Funada is applied supra but lacks the anticipation of wherein said carrier substrate includes a radio frequency integrated circuit. However, Penunuri is presented as evidence to show including the radio frequency integrated circuit with the acoustic wave device is conventional in the art (Abstract, col. 1, lines 14-54, col. 4, lines 36-65, col. 15, lines 35-68, col. 17, lines 25-68, col. 18, lines 5-68).

9. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the radio frequency integrated circuit as taught by Penunuri in order to obtain a radio wave communication device having improved quality (col. 1, lines 46-52).

10. Claims 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Funada (US 6,078,299) in view of Yamada et al, US (5,932,950).

Funada is applied supra but lacks the anticipation of wherein said device further comprises passive components provided on said capping a substrate. Yamada teaches electrode patterns 173, 174, and 176, 177 are formed as acoustic reflectors of the SAW resonators comprising the SAW multiple mode filter. When each electrode is seen as a transmission line, 173, 176 function as meander line inductors and 174, 177 as inter-digital capacitors. Please see figure 17 and column 22, lines 60 to 65. In view of this disclosure it would have been obvious to one of ordinary skill in the art at the time of invention to provide passive components as taught by Yamada, because the passive components can store charge or induce current.

Response to Arguments

11. Applicant's arguments with respect to claims 27-28 have been considered but are moot in view of the new ground(s) of rejection.

12. Applicant's arguments filed May 8, 2006 have been fully considered but they are not persuasive. Claims 22-26, 29 and 32-34 stand rejected.

13. Applicant argued that Funada does not disclose the interconnection being a solder or a metal bump. However, a person of ordinary skill in the art would recognize that Funada teaches the interconnection being a solder or a metal bump (see fig. 6A-9). In addition, the elements must be arranged as required by the claim, but this is not an ipsissimis verbis test, i.e., identity of terminology is not required. In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

14. In response to applicant's argument that the reference is silent about "at least one interconnection for coupling", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Regarding the recitation "using flip-chip technology", product-by-process claims are limited and defined by the process; determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process. In re Hirao and Sato et al., 190 USPQ 15 at 17 (CCPA 1976 (footnote 3). See also IN re Brown and Saffer, 173 USPQ 685 (CCPA 1972); In re Luck and Gainer, 177 USPQ 523 (CCPA 1973); In re Fessmann, 180 USPQ 324 (CCPA 1974); In re Marosi et al., 218 USPQ 289 (Fed. Cir. 1983); In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

15. In addition, during patent examination, the pending claims must be "given *>their< broadest reasonable interpretation consistent with the specification." > In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). While the claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allow. > In re American Academy of Science Tech Center, F.3d, 2004

WL 1067528 (Fed. Cir. May 13, 2004)(The USPTO uses a different standard for construing claims than that used by district courts; during examination the USPTO must give claims their broadest reasonable interpretation.) < This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) >; Chef America, Inc. v. Lamb-Weston, Inc., 358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed. Cir. 2004).

16. Furthermore, "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." In re Heck, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)). A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. Merck & Co. v. Biocraft Laboratories, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). See also Celeritas Technologies Ltd. v. Rockwell International Corp., 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir.1998).

17. In addition, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). >"When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if

any of the structures or compositions within the scope of the claim is known in the prior art." Brown v. 3M, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001). See also MPEP § 2131.02.

18. Finally, the transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, e.g., > Invitrogen Corp. v. Biocrest Mfg., L.P., 327 F.3d 1364, 1368, 66 USPQ2d 1631, 1634 (Fed. Cir. 2003) ("The transition comprising' in a method claim indicates that the claim is open-ended and allows for additional steps."); < Genentech, Inc. v. Chiron Corp., 112 F.3d 495, 501, 42 USPQ2d 1608, 1613 (Fed. Cir. 1997) ("Comprising" is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.); Moleculon Research Corp. v. CBS, Inc., 793 F.2d 1261, 229 USPQ 805 (Fed. Cir. 1986); In re Baxter, 656 F.2d 679, 686, 210 USPQ 795, 803 (CCPA 1981); Ex parte Davis, 80 USPQ 448, 450 (Bd. App. 1948) ("comprising" leaves "the claim open for the inclusion of unspecified ingredients even in major amounts").

Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria Guerrero whose telephone number is 571-272-1837.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MG
July 20, 2006

Zandra V. Smith
Supervisory Patent Examiner
21 July 2006